



1 atgttgcgatcaactttttcatcgcttctgggagtgatatcactgtctcctattgtg
1 Met Leu Leu Ile Asn Phe Phe Ile Ala Val Leu Gly Val Ile Ser Leu Ser Pro Ile Val
61 gttgctcggtatattcttcgacgagattgcactacagttacggcttcttctccctgag
21 Val Ala Arg Tyr Ile Leu Arg Arg Asp Cys Thr Thr Val Thr Val Leu Ser Ser Pro Glu
121 tctgtacgagttcgaacatgttcagctagccagtcagatgtgcgacagttacgtg
41 Ser Val Thr Ser Ser Asn His Val Gln Leu Ala Ser His Glu Met Cys Asp Ser Thr Leu
181 tcagcgtccctttatatctacaatgagttatgataagattgtgacacatttattctt
61 Ser Ala Ser Leu Tyr Ile Tyr Asn Asp Asp Tyr Asp Lys Ile Val Thr Leu Tyr Tyr Leu
241 acatcgtcgggcacaaactgggtccgtaacagcgtcttattcttctagtttgagtaacaac
81 Thr Ser Ser Gly Thr Thr Gly Ser Val Thr Ala Ser Tyr Ser Ser Ser Leu Ser Asn Asn
301 tgggaattgtggtctctcctcggctcggctcagatgctgctgagatcactggagctagt
101 Trp Glu Leu Trp Ser Leu Ser Ala Pro Ala Ala Asp Ala Val Glu Ile Thr Gly Ala Ser
361 tatgtagacagcgatgcactgcgacatacggcagctctttgatataccttactacc
121 Tyr Val Asp Ser Asp Ala Ser Ala Thr Tyr Ala Thr Ser Phe Asp Ile Pro Leu Thr Thr
421 acgacaacgctcgtcttctgctagtcgacttcaacatctagtctaaccacaacatct
141 Thr Thr Thr Ser Ser Ser Ser Ser Ala Thr Ser Thr Ser Ser Ser Leu Thr Thr Ser
481 agtgtttccatttcgggtcctcctacaggaacagctgcaaatggcgaggtagggt
161 Ser Val Ser Ile Ser Val Ser Val Pro Thr Gly Thr Ala Ala Asn Trp Arg Gly Arg Ala
541 atctatcagatcgtgactgatagattgcacgactgacggctccaccacatattatgc
181 Ile Tyr Gln Ile Val Thr Asp Arg Phe Ala Arg Thr Asp Gly Ser Thr Thr Tyr Leu Cys
601 gatgttaccgatagggtctattcggagggtcttatcagggtattatcaatatgctggat
201 Asp Val Thr Asp Arg Val Tyr Cys Gly Gly Ser Tyr Glu Gly Ile Ile Asn Met Leu Asp
661 tacatccaaggcatgggttactgctatttgatttctcctatagtggaataattccc
221 Tyr Ile Gln Gly Met Gly Phe Thr Ala Ile Trp Ile Ser Pro Ile Val Glu Asn Ile Pro
721 gatgacaccggatacggttacgcatatcatggttatggatgaaagatatcttcgccctg
241 Asp Asp Thr Gly Tyr Gly Tyr Ala Tyr His Gly Tyr Trp Met Lys Asp Ile Phe Ala Leu
781 aatacaaatgttgactgcagacgatttgatagcgttggtacggaattgcataatcgc
261 Asn Thr Asn Phe Gly Thr Ala Asp Asp Leu Ile Ala Leu Ala Thr Glu Leu His Asn Arg
841 ggcattgtacttgatggttgatattgttcaatcatttgccttctcaggaagtcatgcc
281 Gly Met Tyr Leu Met Val Asp Ile Val Val Asn His Phe Ala Phe Ser Gly Ser His Ala
901 gacgtggactactctgaatatttccgctattcgtccaggattattttcattcatttgc
301 Asp Val Asp Tyr Ser Glu Tyr Phe Pro Tyr Ser Ser Gln Asp Tyr Phe His Ser Phe Cys
961 tggattacagattactcgaatcagacaaacgttgagcagtgctggttggcgacgatact
321 Trp Ile Thr Asp Tyr Ser Asn Gln Thr Asn Val Glu Gln Cys Trp Leu Gly Asp Thr
1021 gttcctctcgtggacgtcaatacccaacttgacaccgtgaaaagtgaatatcaatcctgg
341 Val Pro Leu Val Asp Val Asn Thr Gln Leu Asp Thr Val Lys Ser Glu Tyr Gln Ser Trp
1081 gtccaagaacttatagctaattacttattgacggcctaagaattgacaccgtcaagcac
361 Val Gln Glu Leu Ile Ala Asn Tyr Ser Ile Asp Gly Leu Arg Ile Asp Thr Val Lys His
1141 gtgcagatggatttttggcaccatttcaagaggctgcagggatttacgccgttggtgaa
381 Val Gln Met Asp Phe Trp Ala Pro Phe Gln Glu Ala Ala Gly Ile Tyr Ala Val Gly Glu
1201 gtattcgacgggtgatccatcctacacatgtccatcaggaaaatcttgacgggtgtcttg
401 Val Phe Asp Gly Asp Pro Ser Tyr Thr Cys Pro Tyr Glu Glu Asn Leu Asp Gly Val Leu
1261 aattatcctgtttattatcctgtcgtctcgtgttgagagtggttagtgggtcgtctcc
421 Asn Tyr Pro Val Tyr Tyr Pro Val Val Ser Ala Phe Glu Ser Val Ser Gly Ser Val Ser
1321 tcgttagtcgatattgatagcgtcaagtctgaatgcaccgacactactccttaggc
441 Ser Leu Val Asp Met Ile Asp Thr Leu Lys Ser Glu Cys Thr Asp Thr Thr Leu Leu Gly
1381 tctttctagagaatcaagataatccggtattccctagctacacttctgatgagcttta
461 Ser Phe Leu Glu Asn Gln Asp Asn Pro Arg Phe Pro Ser Tyr Thr Ser Asp Glu Ser Leu
1441 attaaaaatcgatcgttttactatgctctcagacggcattcccataatttattacgg
481 Ile Lys Asn Ala Ile Ala Phe Thr Met Leu Ser Asp Gly Ile Pro Ile Ile Tyr Tyr Gly

FIG. 1a

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1501 caggagcaaggcctcaatggtggaaacgatccctataatcgagaggcgctttggcttac
601 Gtr Glu Gln Gly Leu Asn Gly Gly Asn Asp Pro Tyr Asn Arg Glu Ala Leu Trp Leu Thr
1561 ggctactccacaacgctcgacgttctacaaatacattgcgtcgttgaatcagattagaat
521 Gln Gly Tyr Ser Thr Thr Ser Thr Phe Tyr Lys Tyr Ile Ala Ser Leu Asn Gtr Ile Arg Asn
1621 caggctatatacaaatgatacttatctcacatatacagaactgggttatttattcggat
541 Gtr Ala Ile Tyr Lys Asp Asp Thr Tyr Leu Thr Tyr Gln Asn Trp Val Ile Tyr Ser Asp
1681 tccacgacaatagcaatgcggaaagggtttacagggaaaccaaataattacgggttctgtca
561 Gln Ser Thr Thr Ile Ala Met Arg Lys Gly Phe Thr Gly Asn Gln Ile Ile Thr Val Leu Ser
1741 aatcttgggaccagtggcagttcgtacactttgacgctttcgaatacgggataataccgca
581 Asn Leu Gly Thr Ser Gly Ser Ser Tyr Thr Leu Thr Leu Ser Asn Thr Gly Tyr Thr Ala
1801 tctagcgttgtatatgagatcttgacatgcacagctgtgactgtggattcgtctgggaat
601 Ser Ser Val Val Tyr Glu Ile Leu Thr Cys Thr Ala Val Thr Val Asp Ser Ser Gly Asn
1861 ttggcagtgcggatgtccagtggcctacaaaagtctttatcaggaatcgcaactggt
621 Leu Ala Val Pro Met Ser Ser Gly Leu Pro Lys Val Phe Tyr Gln Glu Ser Gln Leu Val
1921 ggctctggaatctgctccatgtagag
641 Gly Ser Gly Ile Cys Ser Met

FIG. 1b